

Attachment 11

Program Preferences

Attachment 11 provides the required Program Preferences.

This section demonstrates significant, dedicated, and well defined projects that meet multiple program preferences.

- » This proposal includes five projects that implement Program Preferences, including statewide priorities such as preparing for drought conditions. The Program Preference for addressing long term drought preparedness includes projects specifically meeting a critical water supply or water quality needs of DACs within the Santa Margarita watershed.
- » This proposal demonstrates a high degree of certainty that the Program Preferences will be implemented.
- » This proposal documents the magnitude and breadth of Program Preferences that will be met.

Program Preferences

PRC §75026.(b) and CWC §10544 state that preference will be given to Proposals that include regional projects or programs (CWC §10544). Program Preferences are enumerated below as Program Preference 1 through 7. This section refers to Program Preferences by these numbers.

1. Effectively integrate water management programs and projects within a hydrologic region identified in the California Water Plan; the Regional Water Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR
2. Effectively resolve significant water-related conflicts within or between regions
3. Contribute to attainment of one or more of the objectives of the CALFED Bay-Delta Program
4. Address critical water supply or water quality needs of disadvantaged communities within the region
5. Effectively integrate water management with land use planning
6. For eligible SWFM funding, projects which: a) are not receiving State funding for flood control or flood prevention projects pursuant to PRC §5096.824 or §75034 or b) provide multiple benefits, including, but not limited to, water quality improvements, ecosystem benefits, reduction of instream erosion and sedimentation, and groundwater recharge.
7. Address Statewide priorities

The Upper Santa Margarita Watershed Planning Region IRWM Implementation Proposal includes a suite of five high-priority projects that when combined address long-term drought preparedness by combining critical water supply, water quality, environmental, and economic benefits to the region. All of the proposed projects directly address critical water supply or water quality needs of DACs. These projects are:

- » Vail Lake Stabilization and Conjunctive Use Project
- » Agricultural Irrigation Efficiency Program
- » Hydroelectric Power Generation Project
- » Water Quality Enhancements in Riverside County
- » Implementing Nutrient Management in the Santa Margarita River Watershed

The suite of projects will result in critical water supply and water quality benefits to either a majority of or the entire planning region, including DACs.

There is a correlation between disadvantaged communities and water resource management issues in the upper watershed. Water resource management issues identified throughout Section 2 of the USMW IRWMP (2007) encompass the entire upper watershed and are linked to the vicinity of disadvantaged communities. For example, vineyard workers have become homeowners and now occupy multi-family housing units in disadvantaged communities adjacent to vineyards where they are employed. Efforts to improve water efficiency in agricultural areas increase agriculture sustainability therefore benefiting disadvantaged communities. Vail, Skinner, and Diamond Valley Lakes provide water resources and recreational opportunities to disadvantaged communities. Two disadvantaged areas in the western portion of the upper watershed are within the vicinity of the 303(d) listed Murrieta Creek; however, the majority of tracts within the vicinity are not disadvantaged. Refer to Attachment 12 Disadvantaged Community Assistance where disadvantaged communities, within the Santa Margarita River Watershed, are described in greater detail with accompanying graphics.

Project Benefits to Disadvantaged Communities and Associated Program Preferences (referenced by Program Preference numbers 1 through 7 as identified at the beginning of this section)

1. **Vail Lake Stabilization and Conjunctive Use Project:** The project will provide primarily water supply benefits to the DACs within the RCWD service area. This project will take advantage of additional imported water during wet years for storage and use during dry years. While the source of water for Vail Lake has been natural runoff, construction of a pipeline from an imported water turnout to the lake would allow for seasonal storage and conjunctive use storage. Water could be temporarily stored in Vail Lake for future delivery to agricultural users or piped to the Pauba Groundwater Basin for recharge.

Project construction also includes Quagga Mussel Control Facilities since MWD raw water supply contains quagga mussels and Vail Lake is currently free of quagga mussels. The Project also includes native vegetation restoration.

Program Preference 1: Include regional projects or programs

The proposed Project meets the Upper Santa Margarita Watershed Planning Region adopted IRWMP objectives and strategies, including: *Develop a More Reliable and Diverse Portfolio of Water Supplies: Strategy WS-2b, Groundwater Management, Conjunctive Use, Conjunctive Management and Groundwater Storage Strategies*. The Project also meets the Prop 84 program preferences by addressing the following Statewide priorities: 1) *Drought Preparedness: Promote conjunctive use, Efficient groundwater basin management, and Establish system interties*; and 2) *Protect Surface Water and Groundwater Quality: Protecting and restoring surface water and groundwater quality to safeguard public and environmental health and secure water supplies for beneficial uses*.

Program Preference 4: Contribute to Attainment of One or More of the Objectives of the CALFED Bay-Delta Program

Ecosystem Restoration: This project also will remove invasive species (e.g., quagga mussels) from a major water supply source and improve habitat, thus ultimately resulting in improved ecosystem health of Vail Lake and its tributaries Temecula Creek, Pechanga Creek, and Wilson Creek. The proposed Vail Lake Quagga Mussel Control Facilities are intended to supplement the current quagga mussel control program operated by MWD. MWD's program consists of inspections of water conveyance systems, investigative studies to assess mussel transport and settling, vulnerability assessment of facilities at risk for quagga mussel settlement, studies of managing lake recreational facilities, control strategies to control quagga mussel spread from the Colorado River Aqueduct, evaluate screen designs at pumping plants, extensive chlorination, proposed isolation barriers and evaluation of integrated pest management.

Program Preference 7: Address Statewide Priorities

The Project meets the following statewide water management strategies: water supply reliability, conjunctive use, imported water, groundwater management, surface storage, recreation and public access, regional/local surface storage, and environmental habitat protection and improvement.

Benefits include a sustained, reliable, and economical water supply, reduced pumping costs for EMWD associated with transporting recycled water out of the basin, environmental benefit to maintained open space in the agricultural community, and reduced greenhouse gas emission by reducing associated electrical energy to convey imported water to the region and exporting recycled water out of the basin.

2. **Agricultural Irrigation Efficiency Program:** Also producing water supply benefits to DACs within the RCWD service area, this project will aid in sustaining regional agriculture by reducing agricultural water requirements for 2,000 acres of irrigated agriculture land by 2,115 acre-feet per year (AFY) through implementation of on-farm water use efficiency strategies.

This project involves developing accurate water budgets for 1,724 agricultural operations and comparing them to historical water consumption to identify 200 agricultural operations or 2,000 irrigated acres that show the greatest need for water use efficiency improvements. The project will also audit the sites and identify ways to increase water use efficiency as well as providing financial incentives (50 percent of equipment cost). The sites will be re-evaluated and water supply benefits will be quantified.

Program Preference 1: Include regional projects or programs

The proposed Project meets the Upper Santa Margarita Watershed Planning Region adopted IRWMP objectives and strategies, including:

- » *Objective WS-1 Continue to Implement Water Conservation Efforts to Reduce Water Consumption for the Region: Strategy WS-1, Water Conservation, Urban Water Use Efficiency, Agricultural Water Use Efficiency Strategies;*
- » *Objective WS-3 Managed Drought Response to Increase Water Supply Reliability Through Implementation of Urban Water Management Plans, Drought Water Management Plans, and Water Facility Master Plans: Strategy WS-3, Water Supply Reliability*
- » *Objective SUS-1 Account for Expected Economic Growth, Societal Quality of Life, and Environmental Enhancement When Developing Water Resources Projects: Strategy SUS-1b, Pollution Prevention*
- » *Objective SUS-2b Promote Sustainable Practices for Agriculture: Strategy SUS-2, Agricultural Lands Stewardship*
- » *Objective WQ-3 Reduce Runoff Through Projects that Implement Best Management Practices: Strategy WQ-3a Non-Point Source Pollution Control*
- » *Objective WQ-6 Reduce Salt Loading with a Goal of Salt Balance in the Watershed and Groundwater Basin: Strategy WQ-6, Water Quality Protection and Improvement*
- » *Objective HAB-1a Increase Activities that Enhance Aquatic and Terrestrial Habitats, and Protect Endangered, Threatened and Key Species: Strategy HAB-1a and b, Ecosystem Restoration*

Program Preference 7: Address Statewide Priorities

The Project also meets the Prop 84 program preferences by addressing the following Statewide priorities: 1) *Drought Preparedness: Improve landscape and agricultural irrigation efficiencies, and Achieve long-term reduction of water use;* 2) *Use and Reuse Water More Efficiently: Increase urban and agricultural water use efficiency measures such as conservation and recycling;* 3) *Climate Change Response Actions: Use and reuse water more efficiently, Water use efficiency, and Water system energy efficiency;* 4) *Expand Environmental Stewardship: Improve and expand environmental stewardship to protect and enhance the environment by improving watersheds, and* 5) *Protect Surface Water and Groundwater Quality: Salt/nutrient management planning as a component of the IRWM.*

Further, the Program meets the following statewide water management strategies: water conservation, water supply reliability, imported water, groundwater management, NPS pollution control, and environmental habitat protection and improvement.

3. WR-34 Hydroelectric Power Generation Project: The benefits of this project extend throughout the entire RCWD service area, which includes DACs.

Program Preference 3: Effectively Resolve Significant Water-Related Conflicts:

Water supply in the Santa Margarita Watershed is governed by a settlement agreement and Cooperative Water Resource Management Agreement between Camp Pendleton and Rancho California Water District, defining Rancho California Water District's (RCWD) Gorge flow requirements to the Santa Margarita River system to be 2,500 acre-feet per year. Maintaining base flows and other physical, hydrological, and biological processes and conditions is critical to maintaining the high resource values of the system. In addition to critical water supply needs, endangered and sensitive species as well as critical habitat areas rely on these Santa Margarita River base flows in order to sustain ecosystem function and values. The Santa Margarita River Outfall Project (WR-34 Turnout) was constructed by RCWD to provide imported water in order to help maintain required base flows to the Santa Margarita River. RCWD paid \$1.4 million to construct this turnout project, along with annual imported water purchases from the Metropolitan Water District. Construction of the subject WR-34 Hydroelectric Power Generation Project will strengthen Rancho California Water District's ability to continue to replenish the Santa Margarita River base flows required by settlement agreement with the Federal government by enhancing management of existing water management facilities and using available hydraulic flows to provide green energy in order to reduce costs associated with replenishment of Santa Margarita base flows. Since RCWD must use imported water to help meet this settlement agreement, more energy is being consumed to bring down this water from northern California, hundreds of miles. The subject hydropower project is a direct offset of energy for a water supply project.

Construction of the WR-34 Hydroelectric Power Generation Project will also help stabilize water rates and reduce long-term operational costs, while strengthening RCWD's ability to continue to replenish the Santa Margarita River base flows required by a settlement agreement with the Federal government by enhancing management of existing facilities and using available hydraulic energy to provide safe and reliable electrical energy. Utilize existing topography and existing water transmission infrastructure to produce electrical power. When completed, the produced electrical power will be sold to Southern California Edison, will enhance management of existing water transmission facilities, while providing ecologically sound secondary benefits to water and power customers. Use available hydraulic energy to provide safe and reliable electrical energy while continuing to replenish Santa Margarita River base flows, a critical natural waterway, as required of RCWD by agreement with the Federal government.

Program Preference 1: Include regional projects or programs and Program Preference 7: Address Statewide Priorities

Construction of the Hydroelectric Power Generation Project will distinctly result in enhanced sustainable water rates by producing clean, renewable electric energy through the modification and installation of generation equipment place on existing water infrastructure. The Project will meet the Upper Santa Margarita Watershed Planning Region adopted objectives, including *Promote Economic, Social, and Environmental Sustainability, and Maximize Implementation of Water Resource Projects*. The Project also meets the Prop 84 program preferences of addressing the following Statewide priorities: 1) *Climate Change: Reduction of greenhouse gas emissions, reduced energy consumption, water system energy efficiency*; 2) *Improve Tribal Water and Natural Resources: Development of Tribal consultation and collaboration*; and 3) *Ensure Equitable Distribution of Benefits: Develop multi-benefit projects with consideration of affected disadvantaged communities*.

Successful implementation of the Hydroelectric Power Generation Project is anticipated to result in the following project benefits:

1. Stabilization of RCWD water rates

2. Sustainable water rates for agricultural users
3. Create a reliable municipal electric generation facility that will produce a new energy source from existing water infrastructure, clean electrical energy for the community, renewable electric energy without adding atmospheric carbon load, and a reliable energy source powered by a predictable water flow.
4. Meets Statewide objective of developing alternative electrical generation facilities
5. Meets National objectives of the pending Hydropower Improvement Act of 2010
6. Meets National objective of reducing atmospheric carbon dioxide (CO₂)
4. Water Quality Enhancement in Riverside County: This project will benefit the DACs within Riverside County. The project aims to reduce impacts from hydromodification, promote low impact development (LID), support riparian and aquatic habitat restoration, and reduce the discharges of storm water pollutants and improve water quality.

The project involves identification of retrofit opportunities in the Santa Margarita Watershed, which includes researching, inventorying and prioritizing areas of existing development (i.e. municipal, industrial, commercial, and residential) as candidates for targeted retrofit projects that would reduce the impacts of existing development on the watershed.

Specific outreach will occur through the education of homeowner associations (HOAs), which will serve to identify the need and benefits to retrofit existing common landscaped areas.

The project also involves hydromodification management, which will guide and support the planning, design and construction of priority new and significant predevelopment projects (PDPs) within the Upper Santa Margarita Watershed to manage increases in runoff discharge rates and durations.

Program Preference 1: Include regional projects or programs

First, this project will assess and identify potential retrofit projects at a regional/watershed scale. Projects identified will be ranked on several watershed specific characteristics so as to serve critical areas and/or obtain the best results. Second, the hydromodification portion of the project will serve to guide the land use planning process for local municipalities under Order No. R9-2010-0016 approved by the San Diego Regional Water Quality Control Board, resulting in watershed wide enhancements to hydromodification management.

Program Preference 2: Effectively Integrate Water Management Programs and Projects within the Santa Margarita IRWM Region

This project aims at to integrate water quality and water conservation management with land use planning in the Upper Santa Margarita Watershed. The proposed project will be used by municipalities to guide future hydromodification management programs and retrofit projects to address water quality and water conservation. The project will focus on identifying economically viable projects and processes that provide the most benefit for reducing pollutants, infiltrating and reusing water and/or minimizing/mitigating negative hydromodification impacts. The project will support and supplement stormwater compliance programs required by Board Order R9-2010-0033. This project will effectively integrate water quality, water conservation and municipal land use management programs throughout the Upper Santa Margarita watershed through identification of regional programs that once implemented will maximize reduction of pollutant loads, minimize hydromodification impacts and enhance water conservation practices throughout the watershed.

Program Preference 4: Contribute to Attainment of One or More of the Objectives of the CALFED Bay-Delta Program

- » *Water Quality*: This project will result in reduced pollutants through the implementation of guidance that will be incorporated into land use development process and identification of cost-effective retrofit projects that can be used to provide supplemental pollutant reduction. Proposed retrofit projects will focus on low impact development concepts and regional treatment that encourages pollutant reduction through runoff reductions. By reducing pollutant levels in water bodies in the Upper Santa Margarita River Watershed, water quality in the lower watershed will be enhanced, thus making economic use of this supply more viable.
- » *Water Supply*: This project will result in plans and guidance documents that will highlight the use of Low Impact Development (LID) BMPs design for reuse and hydromodification and thus reduce the required need for water supply from the Sacramento-San Joaquin Delta by increasing the water quality of discharged water (thus reducing the downstream costs for treatment). Retrofit and hydromodification projects implemented consistent with the guidance will likely result in the capture of incremental runoff from existing and future development, resulting in incidental recharge to the groundwater basins, increasing local water supplies and reducing dependency on Sacramento-San Joaquin Delta for water supply.
- » *Ecosystem Restoration*: Proposed hydromodification mitigation guidance and retrofit projects are expected to reduce the potential for stream erosion and improve water quality. These benefits should also reduce potential for (and potentially reverse) habitat degradation, thus ultimately resulting in the protection and restoration of critical estuarine and stream habitat throughout the Santa Margarita watershed.

Program Preference 6: Effectively integrate water management with land use planning

The project will result in a watershed based guidance documents for hydromodification management and BMP retrofit projects that are expected to guide and enhance development of stormwater permit requirements related to land use management from Board Order R9-2010-0033, thus resulting in better integration of water management with land use planning. The project results in management measures that integrate additional water quality and hydromodification protections as well as water conservation practices within the land use planning process.

- » *Protect Surface/Groundwater Quality*: This project will propose retrofit opportunities and hydromodification management measures that will protect and enhance surface and groundwater quality.

Program Preference 7: Address Statewide Priorities

- » *Drought Preparedness*: This project will result in the promotion and implementation of LID BMPs that mitigate the impacts of increased runoff from new developments and existing developments. Capture of this incremental runoff promotes water conservation and water reuse practices that have the potential to improve landscape irrigation efficiencies and maintain local groundwater recharge rates.
- » *Use and Reuse Water More Efficiently*: The project assess opportunities to retrofit BMPs such as efficient irrigation, reuse, bioretention systems paired with cisterns and vaults and infiltration BMPs that promote capture and reuse of water.
- » *Climate Change Response Action*: The project will result in the reduction of runoff and promote the reuse of runoff, where appropriate. The project will therefore result in reduction in pollutant loads or stressors to native streams and estuarine flora and fauna. Reduced pollutant loads decreases susceptibility of native stream habitat and life to stressors associated with long-term climate change. This project will help provide a carbon offset through the promotion of water conservation practices within the watershed.

- » *Expand Environmental Stewardship:* This project assesses and identifies retrofit projects on both public and private lands in order to improve water quality and reduce hydromodification impacts. By proactively identifying retrofit opportunities, the project will educate both public and private land owners about potential environmental stewardship actions they can take to improve the watershed. The hydromodification guidance will support enhancements to land use practices that will also promote environmental stewardship.

5. Implementing Nutrient Management in the Santa Margarita River Watershed: To address nutrients in the watershed, the project will serve to identify water quality objectives (WQOs). This project will identify WQOs throughout the entire Santa Margarita River watershed, which includes areas of DACs.

The approach for developing nutrient WQOs for the Santa Margarita River (SMR) estuary leverages two major activities: 1) data collection to support modeling in the estuary and watershed to develop TMDLs and 2) ongoing research to develop the estuarine Nutrient Numeric Endpoints (NNE) framework, based on dissolved oxygen and macroalgae as endpoints. A stakeholder advisory group (which will be identified as part of the project) will guide project activities, review technical work products, and achieve consensus.

The project involves conducting monitoring and special studies to address data gaps. Pending the analysis of data gaps, potential studies will include core field data collection and special studies.

The goal of core field data collection will be to measure ambient nutrient concentrations and conduct algal bio-assessment studies.

The special studies will include a characterization of the “natural background” conditions of nutrient concentrations and algal growth which will help characterize the variability in numeric targets.

Program Preference 2: Effectively Integrate Water Management Programs and Projects within the Upper Santa Margarita and San Diego IRWM Regions

Due to its watershed-level scale, this project is linked to a large list of other projects (refer to Attachment 3). This project will effectively integrate water management programs and projects throughout the Santa Margarita watershed, because results and conclusions from this project will lead to the implementation of nutrient reduction and water conservation practices throughout the entire watershed.

Program Preference 3: Effectively Resolve Significant Water-Related Conflicts

This project aims to establish nutrient Water Quality Objectives (WQOs) for the Santa Margarita River estuary (Phase I) and ultimately the entire watershed (Phase II) that will lead to the implementation of nutrient reduction and water conservation practices in the watershed. The execution of this project will address water quality concerns between San Diego and Riverside Counties and will avoid jurisdictional interests by bringing the two counties together to achieve project goals.

Due to its watershed-level scale, this project will resolve conflicts by complementing existing plans. This project will also resolve water quality related conflicts by developing nutrient WQOs that will help reduce sources of pollutants, specifically nutrients, and other environmental stressors associated with runoff.

Program Preference 4: Contribute to Attainment of One or More of the Objectives of the CALFED Bay-Delta Program

- » *Water Quality:* This project will reduce water pollution sources, specifically nutrients and other environmental stressors associated with point source and non-point source runoff. By reducing nutrient levels in water bodies in the Santa Margarita River watershed (which spans multiple county borders), the project will improve the state’s water quality from source to tap.

Ecosystem Restoration: The project will provide an opportunity for National Marine Fisheries Service (NMFS) and the California Department of Fish and Game (CDFG) to directly engage in improving water quality and ecosystem health in the watershed. The baseline habitat surveys of the Santa Margarita River will be developed in consultation with the agencies so that stream surveys, data, and monitoring are linked to habitat protocol guidelines for salmonids and other species of concern. In this way, stream and habitat survey, assessment, and monitoring will accomplish the needs of the RWQCB subject study and NMFS/DFG and other stakeholders (such as Trout Unlimited and Elsinore Valley Murrieta Anza Resource Conservation District) focused on like-minded efforts such as the Southern California Steelhead Recovery Plan.

Program Preference 7: Address Statewide Priorities

- » *Drought Preparedness:* This project will help fill data gaps that will ultimately guide implementation programs that have the potential to improve landscape and agricultural irrigation efficiencies, thereby reducing dependence on imported water.
- » *Reuse Water More Efficiently:* Through implementation of irrigation optimization and BMPs to reduce nutrient runoff from wet and dry weather sources, this project will eventually improve water conservation and recycling allowing for efficient use of a diverse mix of water resources, thereby reducing dependence on imported water.
- » *Climate Change Response Action:* The project will result in the reduction of stressors to native stream and estuarine flora and fauna, which decreases their susceptibility to stressors associated with long-term climate change. This project will help provide a carbon offset by improving water conservation within the watershed.
- » *Protect Surface/Groundwater Quality:* This project will develop nutrient WQOs that will help reduce sources of pollutants, specifically nutrients, and other environmental stressors associated with point and non-point source runoff that discharge into surface waters.